

Curling, Donna v. Raffensperger, Brad

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THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF GEORGIA
ATLANTA DIVISION

DONNA CURLING, et al.,
Plaintiffs,

CIVIL ACTION FILE

vs.

NO. 1:17-CV2989-AT

BRAD RAFFENSPERGER, et
al.,

Defendants.

VIDEOTAPED DEPOSITION OF
ANDREW W. APPEL, Ph.D.
TAKEN BY REMOTE VIDEOCONFERENCE

January 27, 2022

7:33 a.m.

REPORTED REMOTELY BY:
LAURA R. SINGLE, CCR-B-1343

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(All appearing remotely)

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A P P E A R A N C E S

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1 it's malfunctioning because it's been hacked to
2 cheat, it may well print on to the ballot summary a
3 candidate selection that completely disagrees with
4 the voter's intent as the voter expressed it in
5 touching the touch screen. So in that case the
6 voter's intent would be absolutely not clear in the
7 ballot summary.

8 Q. Got it.

9 So the only time where you disagree with the
10 voter's intent being clear is with respect to a
11 malfunctioning BMD whether because of hacking or
12 other reasons? Is that accurate?

13 A. That's right.

14 Q. Okay. So let's go back to Exhibit 3, and
15 that would be your July -- the date of June 28, 2021.
16 I apologize. I will mix those up. I refer to them
17 as July because that's when they were served to us --

18 A. Got it.

19 Q. -- just so -- so if you'll scroll with me to
20 paragraph 12.

21 A. Got it.

22 Q. You state there: I've not been asked to
23 perform a forensic cyber security examination of any
24 specific voting machine.

25 Do you see that?

1 A. Yes.

2 Q. And is that still accurate?

3 A. Yes.

4 Q. Have you performed any other type of
5 examination of a specific voting machine for your
6 report in this case?

7 A. In this case, no.

8 Q. Okay. Of course, you've looked at many
9 different voting machines, many different kinds of
10 examinations. Would that be right?

11 A. I have performed some examinations of
12 specific voting machines myself, and I have read the
13 scientific literature for detailed descriptions of
14 other examinations of other voting machines, yes.

15 Q. Okay. And have you read the scientific --
16 excuse me. I'm going to strike that. There's a fire
17 truck passing. I apologize.

18 Have you read the scientific literature or
19 any other reports as it relates to the Dominion
20 voting machines utilized in Georgia?

21 A. I've read various things about the Dominion
22 machines, but I have not read a cyber security
23 examination report for those machines.

24 Q. What kind of things have you read about the
25 machines?

1 A. I've read the Dominion literature. I may
2 have read the independent test lab report. I may
3 have interviewed people who have used similar types
4 of Dominion machines in other states.

5 Q. When you say interviewed people, who did you
6 interview?

7 A. Most recently I talked to a voter in Camden
8 County, New Jersey, who used a similar machine in
9 2019.

10 Q. Just a general voter you found?

11 A. She had contacted me because she was
12 interested in Camden County's selection process for
13 voting machines.

14 Q. Do you recall this person's name?

15 A. Rena, R-E-N-A, and I can't recall her last
16 name at the moment.

17 Q. That's okay.

18 So in light of not performing any
19 examination of the machines utilized in Georgia, you
20 don't feel that prevents you from offering your
21 opinions in here; is that right?

22 A. That's right.

23 Q. Okay. And sort of related to the not
24 examining machines, have you examined any other
25 election system adjacent items utilized in Georgia?

1 And by that I mean items like the voter registration
2 database or the IT infrastructure of the Secretary of
3 State's office?

4 A. No.

5 Q. And with respect to specific voting machine,
6 would that include the poll pads used for voter
7 check-in?

8 A. I have not examined those.

9 Q. Okay. So if you'll scroll with me to
10 paragraph 20.

11 A. Yes.

12 Q. And you say there: It is a clear scientific
13 consensus that any computer-based voting machine can
14 be hacked.

15 Do you see that?

16 A. Yes.

17 Q. Do you understand any expert in this case to
18 disagree with you on that statement?

19 A. No.

20 Q. So you go on in paragraph 21 to say: It is
21 a clear scientific consensus that the only practical
22 solution to this problem (that is secure enough for
23 use in public elections) is to mark votes on
24 voter-verified paper ballots that can be recounted or
25 audited by hand.

1 Q. Have you seen reports of that for the
2 Dominion equipment used in Georgia?

3 A. No.

4 Q. Okay. So accepting that first sentence of
5 42 applies to ballot-marking devices with the caveats
6 you described there, right?

7 A. Right.

8 Q. With the second sentence saying, therefore,
9 it is reasonable, would that not similarly apply to
10 ballot-marking devices?

11 A. No. In the paragraphs starting at 43, 44,
12 and following explain why.

13 Q. Okay. If you'll turn with me to paragraph
14 67.

15 A. All right.

16 Q. And here in this paragraph you're talking
17 about a hypothetical hacker that has installed
18 fraudulent software in a BMD, right?

19 A. Right.

20 Q. Have you seen fraudulent software installed
21 in a BMD that switches votes?

22 A. No.

23 Q. Are you aware of any such fraudulent
24 software?

25 A. That has been used in actual elections, no.

1 this, right?

2 A. Yes.

3 Q. Okay. Are you aware of fraudulent software
4 like that that self-propagates to multiple BMDs?

5 A. Yes.

6 Q. And where is that?

7 A. The concept of fraudulent software that
8 propagates on removable media from one computer to
9 another, not specifically in the context of
10 elections, was first explained to me in approximately
11 1979. And the first demonstration of this on actual
12 voting machines was done by a scientific study at
13 Princeton University in -- published in 2006 where it
14 was done on the exact model of voting machine that
15 was in use in Georgia between about that time and
16 2018.

17 Q. So I think my question was a little more
18 specific to that as to BMDs. Are you aware of such
19 software existing?

20 A. Am I aware that someone has created any such
21 software specifically for a BMD, no.

22 Q. Okay. And in that Princeton study you were
23 referring to, how did that fraudulent software
24 self-propagate?

25 A. It propagated on the removable media that

1 efficient method a hacker could use is to do it one
2 machine at a time by a screwdriver.

3 Q. We just discussed that you're not aware of
4 both self-propagating and adaptable malware, right?

5 A. I'm aware of how straightforward it is in
6 principal to build each of those and combine them
7 together. I am not aware of a hacker who has done
8 that to an actual BMD.

9 Q. Whether in a lab or in an actual election,
10 right?

11 A. Right.

12 Q. So if you're not aware of it, let's talk
13 about what we know you are aware of, which is
14 individually adaptable but not self-propagating,
15 right?

16 A. Yeah.

17 Q. Okay. So that would require access to
18 individual BMDs; would it not?

19 A. If it's not self-propagating.

20 Q. Okay.

21 A. Well, there's self-propagating and -- yeah.
22 All right. If you want to -- if you want to talk
23 about malware that does not propagate by means of
24 network server removable media, that would require
25 access to individual BMDs.

1 Q. I'm trying to use the same terminology
2 you --

3 A. Yeah. I'm not aware of a specific piece of
4 malware that is both self-propagating and adaptable,
5 but there is no scientific difficulty in combining
6 those two concepts into the same piece of malware.

7 Q. Okay. But you've never done it?

8 A. I've never done it.

9 Q. And you're not aware that anybody has ever
10 done it, right?

11 A. Right.

12 Q. Okay. So accepting that, let's talk about
13 what we are aware of, which is adaptable but not
14 self-propagating, right?

15 A. We can talk about adaptable but not
16 self-propagating malware.

17 Q. So do you have -- going back to the
18 seven-minute timeframe, do you have any reason to
19 believe implanting that adaptable but not
20 self-propagating malware into a BMD would take any
21 shorter or longer time than what it took you to
22 implant it on this --

23 A. I would expect it would take a shorter time.
24 The seven minutes it took me to install the malware
25 in a Sequoia AVC Advantage BMD required, you know,

1 CERTIFICATE

2 STATE OF GEORGIA:

3 COUNTY OF GWINNETT:

4 I hereby certify that the foregoing
5 transcript was taken down, as stated in the caption,
6 and the colloquies, questions and answers were
7 reduced to typewriting under my direction; that the
8 transcript is a true and correct record of the
9 evidence given upon said proceeding.

10 I further certify that I am not a
11 relative or employee or attorney of any party, nor am
12 I financially interested in the outcome of this
13 action.

14 I have no relationship of interest in
15 this matter which would disqualify me from
16 maintaining my obligation of impartiality in
17 compliance with the Code of Professional Ethics.

18 I have no direct contract with any
19 party in this action and my compensation is based
20 solely on the terms of my subcontractor agreement.

21 Nothing in the arrangements made for
22 this proceeding impacts my absolute commitment to
23 serve all parties as an impartial officer of the
24 court.

25 This the 13th day of February, 2022.



LAURA R. SINGLE, CCR-B-1343